

2015 IEEE 15th Mediterranean Microwave Symposium (MMS 2015)

**Lecce, Italy
30 November – 2 December 2015**



**IEEE Catalog Number: CFP1546H-POD
ISBN: 978-1-4673-7603-7**

**Copyright © 2015 by the Institute of Electrical and Electronic Engineers, Inc
All Rights Reserved**

Copyright and Reprint Permissions: Abstracting is permitted with credit to the source. Libraries are permitted to photocopy beyond the limit of U.S. copyright law for private use of patrons those articles in this volume that carry a code at the bottom of the first page, provided the per-copy fee indicated in the code is paid through Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923.

For other copying, reprint or republication permission, write to IEEE Copyrights Manager, IEEE Service Center, 445 Hoes Lane, Piscataway, NJ 08854. All rights reserved.

******This publication is a representation of what appears in the IEEE Digital Libraries. Some format issues inherent in the e-media version may also appear in this print version.***

IEEE Catalog Number:	CFP1546H-POD
ISBN (Print-On-Demand):	978-1-4673-7603-7
ISSN:	2157-9822

Additional Copies of This Publication Are Available From:

Curran Associates, Inc
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: (845) 758-0400
Fax: (845) 758-2633
E-mail: curran@proceedings.com
Web: www.proceedings.com

CURRAN ASSOCIATES INC.
proceedings
.com

TABLE OF CONTENTS

WATER-LOADED METAL-DIELECTRIC WALL DIAGONAL HORN ANTENNA FOR HYPERTHERMIA APPLICATION	1
<i>Singh, S. ; Singh, S.P.</i>	
WIRELESS POWER TRANSFER LINK FOR RECHARGEABLE DEEP BRAIN STIMULATORS.....	5
<i>Monti, G. ; De Paolis, M.V. ; Tarricone, L.</i>	
A BANACH-SPACE MULTIFREQUENCY IMAGING APPROACH FOR ELECTROMAGNETIC SUBSURFACE SENSING	9
<i>Estatico, C. ; Fedeli, A. ; Pastorino, M. ; Randazzo, A. ; Tavanti, E.</i>	
EXPOSURE PROTOCOL SETUP FOR AGRO FOOD TREATMENT. METHOD AND SYSTEM FOR DEVELOPING AN APPLICATION FOR HEATING IN REVERBERATION CHAMBER.....	13
<i>Paolanti, M. ; Pollini, R. ; Frontoni, E. ; Mancini, A. ; De Leo, R. ; Zingaretti, P. ; Bisceglia, B.</i>	
A UHF-RFID POWER MANAGEMENT CIRCUIT FOR BODY SENSOR NETWORKS	17
<i>Pasca, M. ; Catarinucci, L. ; Colella, R. ; De Donno, D. ; Tarricone, L. ; D'Amico, S. ; Baschiroto, A.</i>	
A HF-RFID, -19 DBM SENSITIVITY FULLY INTEGRATED RF-DC VOLTAGE MULTIPLIER	21
<i>Pasca, M. ; Catarinucci, L. ; Colella, R. ; De Donno, D. ; Tarricone, L. ; D'Amico, S.</i>	
IMPACT OF DEFECTED GROUND STRUCTURES ON THE BANDWIDTH OF BRANCH LINE HYBRIDS.....	25
<i>Polater, A.M. ; Nesimoglu, T.</i>	
DESIGN OF MID-IR MICROSTRUCTURED FIBER LIGHT SOURCE BASED ON DYSPROSIUM DOPED CHALCOGENIDE GLASS	29
<i>Falconi, M.C. ; Palma, G. ; Chahal, R. ; Starecki, F. ; Nazabal, V. ; Troles, J. ; Adam, J.L. ; Prudeniano, F.</i>	
FIRST RESULTS ON SIGE BICMOS CAPACITIVELY-LOADED SPLIT RING RESONATORS TRANSMISSION LINE FILTERS.....	33
<i>Ibrahim, S. ; Boccia, L. ; Calzona, D. ; Amendola, G. ; Boria, A.L.</i>	
A COMPACT SIGE BICMOS FOUR-WAY DIFFERENTIAL POWER DIVIDER/COMBINER.....	36
<i>Santos, V.G. ; Boccia, L. ; Calzona, D. ; Amendola, G. ; Scaccianoce, S.</i>	
“MIXED-MODE” STRESS DEPENDENCE RELIABILITY DEGRADATION IN SIGE:C HBTS FABRICATED ON THIN-FILM SOI	40
<i>Yang, Y. ; Luo, J.X. ; Chen, J. ; Lu, K. ; Chai, Z. ; Wu, X.M. ; Wang, X.</i>	
TERAHERTZ WAVES IN CULTURAL HERITAGE: IMAGING RESULTS VIA THE FIBER- COUPLED TERAHERTZ TIME DOMAIN SYSTEM	44
<i>Catapano, I.</i>	
HEATING PATTERN OF FROZEN FOOD AFFECTED BY MICROWAVE OVEN FREQUENCY.....	48
<i>Donglei Luan ; Yifen Wang</i>	
ANISOTROPIC ARTIFICIAL MATERIAL WITH ENZ AND HIGH REFRACTIVE INDEX PROPERTY FOR HIGH GAIN VIVALDI ANTENNA DESIGN	52
<i>Pandey, G.K. ; Meshram, M.K.</i>	
EXPERIMENTAL RESULTS ON THE EFFECTIVENESS OF MICROWAVE TREATMENT OF PHOENIX CANARIENSIS PALM INFESTED BY RHYNCHOPHORUS FERRUGINEUS.....	56
<i>Massa, R. ; Greco, A. ; Caprio, E. ; Panariello, G. ; Migliore, M.D. ; Pinchera, D. ; Schettino, F. ; Griffo, R.</i>	
AN ACCURATE ANALYSIS OF FINITE-SIZED TAPERED SLOT ANTENNAS.....	60
<i>Keskin, A. ; Koksai, A.</i>	
WIDEBAND 200 GHZ INJECTION-LOCKED FREQUENCY DIVIDE-BY-TWO MMIC IN GAAS MHEMT TECHNOLOGY	64
<i>Messinger, T. ; Antes, J. ; Wagner, S. ; Leuther, A. ; Kallfass, I.</i>	
OPTICALLY TRANSPARENT GRAPHENE-BASED SALISBURY SCREEN MICROWAVE ABSORBER	68
<i>Grande, M. ; D'Orazio, A. ; Bianco, G.V. ; Bruno, G. ; Vincenti, M.A. ; de Ceglie, D. ; Scalora, M.</i>	
EM DESIGN OF A PASSIVE RFID-BASED DEVICE WITH SENSING AND REASONING CAPABILITIES.....	71
<i>Colella, R. ; Catarinucci, L. ; Tarricone, L.</i>	
COST-EFFECTIVE ELECTROMAGNETIC CHARACTERIZATION SYSTEM FOR RADIATION PATTERN AND SENSITIVITY ESTIMATION OF UHF RFID TAGS	75
<i>Colella, R. ; Catarinucci, L. ; Coppola, P. ; Tarricone, L.</i>	
ELECTROMAGNETIC CHARACTERIZATION OF INHOMOGENEOUS CHIRAL MEDIA USING THE STATE SPACE METHOD	79
<i>Zarifi, D. ; Oraizi, H.</i>	

INVESTIGATION OF DIRECTIONAL ANTENNAS EFFECT ON ENERGY EFFICIENCY AND RELIABILITY OF THE IEEE 802.15.4 STANDARD IN OUTDOOR WIRELESS SENSOR NETWORKS.....	83
<i>Michalopoulou, A. ; Koxias, E. ; Lazarakis, F. ; Zervos, T. ; Alexandridis, A.A.</i>	
50 GHZ LC-ACTIVE OSCILLATOR IN 65 NM CMOS.....	87
<i>Pepe, D. ; Zito, D.</i>	
ANALYSES OF PHASE NOISE REDUCTION TECHNIQUES IN CMOS HARTLEY OSCILLATOR TOPOLOGY AT THE MM-WAVES: NOISE FILTER AND OPTIMUM CURRENT DENSITY	91
<i>Chlis, I. ; Pepe, D. ; Zito, D.</i>	
NOVEL MULTIPLEXER TOPOLOGIES BASED ON COUPLED RESONATOR STRUCTURES	95
<i>Skaik, T.F. ; Tubail, D.A.</i>	
VARIABLE IMPEDANCE MATCHING NETWORK BASED ON VARACTOR DIODES.....	99
<i>Added, M. ; Boulejfen, N.</i>	
A FREQUENCY-HOPPING BCS STRATEGY FOR IMAGING BURIED OBJECTS.....	103
<i>Tenuti, L. ; Oliveri, G. ; Viani, F. ; Polo, A. ; Donelli, M. ; Massa, A.</i>	
REDUCED ORDER MODELLING OF MICROWAVE COMPONENTS BY MEANS OF HIGHER-ORDER FINITE-ELEMENT METHOD	107
<i>Fotyga, G. ; Rewiński, M. ; Mrozowski, M.</i>	
INFLUENCE OF LOSSLESS AND LOSSY, HETEROGENEOUS ENVIRONMENTS ON GROUND PENETRATING RADAR ANTENNA BEHAVIOUR.....	111
<i>Warren, C. ; Giannopoulos, A.</i>	
A NOVEL MINIATURIZED CIRCULARLY POLARIZED PIFA ANTENNA FOR RFID READERS.....	116
<i>Zamali, M. ; Osman, L. ; Ragad, H. ; Latrach, M.</i>	
ANTENNAS FOR UHF-RFID PRINTER-ENCODERS.....	120
<i>Michel, A. ; Buffi, A. ; Nepa, P. ; Manara, G.</i>	
APPLICATION OF Z-TYPE AND HILBERT FRACTAL STRUCTURES FOR MULTIBAND AND CIRCULARLY POLARIZED MICROSTRIP ANTENNAS	124
<i>Oraizi, H. ; Hedayati, S.</i>	
NOVEL SUBSTRATE INTEGRATED WAVEGUIDE FILTER BASED ON MUSHROOM RESONATORS.....	128
<i>Tomassoni, C. ; Silvestri, L. ; Bozzi, M. ; Perregrini, L.</i>	
DESIGN OF PLANAR RESONATORS ON FLEXIBLE SUBSTRATE FOR CHIPLESS TAGS INTENDED FOR CRACK SENSING	132
<i>Rodrigues, R.A.A. ; Candeia Gurjao, E. ; de Assis, F.M. ; Palazzi, V. ; Alimenti, F. ; Roselli, L. ; Mezzanotte, P. ; Tedjini, S.</i>	
NEW TECHNIQUE TO DRIVE THE CENTRAL FREQUENCY AND TO IMPROVE BANDWIDTH OF EBG STRUCTURES	136
<i>El Ghabzouri, M. ; Es Salhi, A. ; Mendes, P.M.</i>	
DEVELOPMENT OF DUAL-BAND WEARABLE TEXTILE ANTENNA FOR WLAN APPLICATIONS.....	140
<i>Sfar, I. ; Osman, L.</i>	
2D COMPLEXITY REDUCED MODEL FOR NONLINEARITY AND I/Q IMPERFECTIONS IN CONCURRENT DUAL-BAND RF TRANSMITTERS.....	143
<i>Lajnef, S. ; Zemzmi, I. ; Boulejfen, N. ; Ghannouchi, F.M.</i>	
COMPARATIVE ANALYSIS OF MWCNTS NANOCOMPOSITES AT MICROWAVE FREQUENCY.....	147
<i>Yasir, M. ; Savi, P. ; Giorcelli, M. ; Tagliaferro, A.</i>	
A COMPACT MODIFIED S-SHAPED RFID TAG ANTENNA FOR METALLIC APPLICATIONS	151
<i>Ennasar, M.A. ; Aznabet, I. ; El Mrabet, O. ; Essaïdi, M.</i>	
APPLICATION OF A SAP-DOA METHOD TO GPR DATA FOR THE LOCATION OF REINFORCING ELEMENTS IN CONCRETE.....	154
<i>Meschino, S. ; Pajewski, L.</i>	
EXPONENTIALLY TAPERED ANTIPODAL VIVALDI ANTENNA FOR BREAST CANCER DETECTION	158
<i>Kanjaa, M. ; El Mrabee, O. ; Khalladi, M. ; Essaïdi, M.</i>	
COMPARISON OF FERROELECTRIC AND VARACTOR TUNABLE FILTERS CONTROLLED BY DAC	161
<i>Yigit, Y. ; Yazgan, E.</i>	

SELECTIVE SEPARATION OF BIOMOLECULES FROM FOOD WASTE BY MAGNETIC FISHING TECHNIQUE - A REVIEW	165
<i>Nath, A. ; Veraszto, B. ; Koris, A. ; Bhatlacharjee, C.</i>	
INFLUENCE OF MICROWAVE EXPOSURE ON THE DEVELOPMNENT OF PHASEOLUS VULGARIS L. PLANTS.....	169
<i>Massa, R. ; Linguadoca, A. ; Migliore, M.D. ; Cozzolino, G. ; Gargiulo, N. ; D'Ambrosio, N.</i>	
A NOVEL COMPACT TRIPLE-UWB NON-CONCENTRIC SPLIT RING RESONATOR ANTENNA	172
<i>Ben Issa, I. ; Essaaidi, M.</i>	
E²GPR - EDIT YOUR GEOMETRY, EXECUTE GPRMAX2D AND PLOT THE RESULTS!.....	175
<i>Pirrone, D. ; Pajewski, L.</i>	
MODULATION OF PRO-INFLAMMATORY RESPONSE IN A MOUSE MODEL OF PARKINSON'S DISEASE BY NON-INVASIVE PHYSICAL APPROACH	179
<i>Panaro, M.A. ; Carofiglio, V. ; Calvello, R. ; Aloisi, A. ; Rinaldi, R. ; Nicolardi, G. ; Lofrumento, D.D. ; De Nuccio, F. ; La Pesa, V. ; Fontani, V. ; Rinaldi, S.</i>	
A NOVEL FIRST RESPONDERS LOCATION TRACKING SYSTEM: ARCHITECTURE AND FUNCTIONAL REQUIREMENTS.....	183
<i>Tedesco, S. ; Khodjaev, J. ; O'Flynn, B.</i>	
NANOCLAY BASED ENHANCERS FOR MICROWAVEABLE POLYMERIC PACKAGING.....	187
<i>Galdi, M.R. ; Olivieri, R. ; Liguori, L. ; Albanese, D. ; Di Matteo, M. ; Di Maio, L.</i>	
SKIN REMOVAL TECHNIQUES FOR BREAST CANCER RADAR DETECTION BASED ON ARTIFICIAL NEURAL NETWORKS	191
<i>Caorsi, S. ; Lenzi, C.</i>	
3D HIGH GAIN UHF RFID TAG FOR NAVIGATION APPLICATIONS	195
<i>Benmessaoud, L. ; Touhami, R. ; Bui, D.H.N. ; Vuong, T.P. ; Yagoub, M.C.E.</i>	
NOVEL ILLUMINATION AND PARAMETER EXTRACTION TECHNIQUE FOR THE CHARACTERIZATION OF MULTILAYER STRUCTURES IN THE GHZ RANGE WITH DEEP SUB-WAVELENGTH RESOLUTION	199
<i>Pourkazemi, A. ; Ranson, W. ; Stiens, J. ; Becquaert, M. ; Vandewal, M.</i>	
RADIO DETECTION OF EXTENSIVE AIR SHOWERS AT THE PIERRE AUGER OBSERVATORY	203
<i>Mathys, S.</i>	
ABOUT SINGLE BLOCK WITH RECEIVER AND FREQUENCY-METER IN TERAHERTZ BAND AT THE BASE OF JOSEPHSON JUNCTION	207
<i>Denisov, A. ; Qiu Jing Hui ; Shengchang Lan ; Cherukhin, I. ; Liu Hao ; Soldovieri, F.</i>	
MICROWAVE GENERATORS FOR APPLICATION TO PARTICLE ACCELERATORS AND ION SOURCES: KLYSTRONS, OTHER VACUUM TUBES AND SOLID STATE AMPLIFIERS	211
<i>Cavenago, M.</i>	
ON INVERSE SCATTERING AND IMAGING SOLUTIONS FOR OBJECTS BURIED WITHIN UNIAXIAL ANISOTROPIC MEDIA	215
<i>Lesselier, D. ; Ping-Ping Ding ; Rodeghiero, G. ; Lambert, M. ; Yu Zhong</i>	
PENETRATION LOSS OF THE ELECTROMAGNETIC FIELD IN BUILDINGS WITH APERTURES: A CASE OF STUDY	219
<i>Strappini, M. ; Angelucci, M. ; Vecchiocattivi, M. ; Dionigi, M. ; Angiolillo, A.</i>	
PRACTICAL CONSIDERATION TO DESIGN BROADBAND X-BAND POWER AMPLIFIERS: COMPARATIVE RESULTS.....	223
<i>Yarman, B.S. ; Ejaz, M.E.</i>	
ELECTROMAGNETIC IMAGING: METHODS AND APPLICATIONS.....	227
<i>Pastorino, M.</i>	
DESIGN OF MATCHED WIRELESS POWER TRANSFER LINKS REALIZED WITH COUPLED INDUCTORS	231
<i>Costanzo, A. ; Dionigi, M. ; Mastri, F. ; Mongiardo, M. ; Monti, G. ; Perfetti, R.</i>	
POSSIBILITY OF THE DETECTION IN IR AND SUB/THZ SPECTRAL REGION USING MCT THIN LAYER RECEIVERS: DESIGN OF THE CHIP, OPTICAL ELEMENTS AND ANTENNA PATTERN	235
<i>Sizov, F. ; Tsybrii, Z. ; Zabudsky, V. ; Sakhno, M. ; Shevcik-Sheker, A. ; Smoliy, M. ; Dieguez, E. ; Dvoretzky, S.</i>	
SAR IMAGING IN AN AUTOMOTIVE SCENARIO.....	239
<i>Iqbal, H. ; Sajjad, M.B. ; Mueller, M. ; Waldschmidt, C.</i>	
A 77-GHZ CAVITY ANTENNA ARRAY IN PCB TECHNOLOGY.....	243
<i>Vasanelli, C. ; Ruess, T. ; Waldschmidt, C.</i>	

COMBINED MICROSTRIP AND SUSPENDED SUBSTRATE STRIPLINE COMBLINE BANDPASS FILTER WITH TWO TRANSMISSION ZEROS.....	247
<i>Alaqil, H. ; Jia sheng Hong</i>	
MEMS BASED LC TANK WITH EXTENDED TUNING RANGE FOR MULTI-BAND APPLICATIONS.....	251
<i>Cazzorla, A. ; Sorrentino, R. ; Farinelli, P.</i>	
APPLICATION OF MICROWAVE AND RF IN FOOD PROCESSING, MICROORGANISMS AND PEST CONTROL.....	255
<i>Poltronieri, P. ; Santino, A. ; Ciarmiello, L.F. ; Hubert, J.</i>	
NEW DESIGN OF SIW LEAKY WAVE ANTENNA BASED ON A T-SHAPED SLOT WITH CONTROLLABLE SCANNING RATE FROM BACKWARD TO FORWARD DIRECTION.....	259
<i>Rihem, N. ; Lassaad, L. ; Hanen, H. ; Ali, G.</i>	
WORKERS EXPOSURE TO CELL PHONE RADIATIONS.....	263
<i>Valbonesi, S. ; Bisceglia, B.</i>	
DESIGN OF DUAL BAND BANDSTOP MICROSTRIP DEFECTED GROUND STRUCTURE FILTER USING ADAPTIVE NEURO-FUZZY INFERENCE SYSTEM.....	267
<i>Taher, H. ; Farrell, R.</i>	
RF-ENERGY HARVESTING AND WIRELESS POWER TRANSFER EFFICIENCY FROM DIGITALLY MODULATED SIGNALS.....	271
<i>Blanco, J. ; Bolos, F. ; Collado, A. ; Georgiadis, A.</i>	
FILTERED FORWARD-BACKWARD TIME-STEPPING METHOD WITHOUT INFORMATION ON INCIDENT FIELD.....	275
<i>Moriyama, T. ; Takenaka, T.</i>	
A WIRELESS POWER LINK ON LEATHER FOR APPLICATIONS IN THE CLOTHING INDUSTRY.....	279
<i>Monti, G. ; Corchia, L. ; De Benedetto, E. ; Tarricone, L.</i>	
MICROWAVE MICROFLUIDIC SENSOR FOR DETERMINATION OF GLUCOSE CONCENTRATION IN WATER.....	283
<i>Ebrahimi, A. ; Withayachumnankul, W. ; Al-Sarawi, S.F. ; Abbott, D.</i>	
QPSK DEMODULATOR BASED ON SIX PORT JUNCTION.....	286
<i>Harabi, F. ; Lakdhar, S. ; Gharsallah, A.</i>	
SPACE-TIME ESTIMATION ALGORITHMS FOR WIDEBAND SIGNALS.....	291
<i>Noureddine, L. ; Harabi, F. ; Gharsallah, A.</i>	
FLEXIBLE CAD METHODOLOGY FOR UWB FILTER WITH A TAILORED NOTCH.....	295
<i>Cardillo, E. ; Caddemi, A.</i>	
STATISTICAL MODELING OF WIND TURBINES' BI-STATIC FREE-SPACE SCATTERING CHARACTERISTICS FOR UHF-BAND APPLICATIONS.....	299
<i>Coskun, A.F. ; Saynak, U. ; Karabayir, O. ; Biyik, M. ; Bati, B. ; Bati, O. ; Serim, H.A.</i>	
RECONFIGURABLE FREQUENCY IDENTIFICATION RECEIVERS.....	303
<i>Espinosa-Espinosa, M. ; Llamas-Garro, I. ; de Melo, M.T. ; de Oliveira, B.G.M. ; Jung-Mu Kim</i>	
ACCURATE MODELING OF THE MICROWAVE TREATMENT IN REVERBERATING CHAMBER. SANITATION OF AGRO FOOD MATERIAL.....	307
<i>Paolanti, M. ; Bacchiani, R. ; Frontoni, E. ; Mancini, A. ; De Leo, R. ; Zingaretti, P. ; Bisceglia, B.</i>	
ON CALIBRATION OF CORRECTION LAW FOR EMF MEASUREMENT ERRORS DUE TO THE PROXIMITY OF THE HUMAN BODY.....	311
<i>Kwate, R.K. ; Taybi, C. ; Elmagroud, B. ; Beauvois, V. ; Geuzaine, C. ; Picard, D. ; Ziyat, A.</i>	
A K-BAND MINIATURIZED ANTENNA FOR SAFE MOBILITY OF VISUALLY IMPAIRED PEOPLE.....	315
<i>Di Mattia, V. ; Petrini, V. ; Pieralisi, M. ; Manfredi, G. ; De Leo, A. ; Russo, P. ; Cerri, G. ; Scalise, L.</i>	
CAVITY-BACKED DUAL LINEAR POLARIZATION SINUOUS ANTENNA WITH INTEGRATED MICROSTRIP BALUN FEED.....	319
<i>Alotaibi, I.M. ; Jia sheng Hong ; Almorqi, S.K.</i>	
DEMONSTRATION AND CHARATERIZATION OF FULLY 3D-PRINTED RF STRUCTURES.....	323
<i>Mariotti, C. ; Tentzeris, M.M. ; Roselli, L.</i>	
HIGHER-ORDER TUNABLE FREQUENCY SELECTIVE SURFACE WITH MINIATURIZED ELEMENTS.....	327
<i>Ebrahimi, A. ; Withayachumnankul, W. ; Al-Sarawi, S.F. ; Abbott, D.</i>	
MICROWAVE TREATMENT OF AGRICULTURAL SOIL SAMPLES.....	331
<i>Cicatelli, A. ; Guarino, F. ; Castiglione, S. ; Grimaldi, M. ; Di Luca, A. ; Esposito, D. ; Bisceglia, B.</i>	
PASSIVE UHF RFID TAG FOR SPECTRAL FINGERPRINT MEASUREMENT.....	334
<i>Escobedo-Araque, P. ; Martinez-Olmos, A. ; Carvajal, M.A. ; Palma, A.J. ; Fernandez-Salmeron, J.</i>	

OPTIMAL NEAR-FIELD INTERPOLATION IN THE TIME DOMAIN FROM DATA ACQUIRED VIA A NONCONVENTIONAL PLANE-RECTANGULAR SCANNING.....	338
<i>D'Agostino, F. ; Ferrara, F. ; Gennarelli, C. ; Guerriero, R. ; Migliozi, M.</i>	
LEAF COMPATIBLE "ECO-FRIENDLY" TEMPERATURE SENSOR CLIP FOR HIGH DENSITY MONITORING WIRELESS NETWORKS	342
<i>Palazzari, V. ; Mezzanotte, P. ; Alimenti, F. ; Fratini, F. ; Orecchini, G. ; Virili, M. ; Mariotti, C. ; Roselli, L.</i>	
SIMULATION OF ELECTRON MOBILITY IN SEMI-METAL HGCDTE QUANTUM WELLS: COMPOSITION DEPENDENCIES	346
<i>Melezhik, E.O. ; Gumenjuk-Sichevska, J.V. ; Sizov, F.F.</i>	
SIMULATION ANALYSIS ON THE PROPAGATION CHARACTERISTICS OF ELECTROMAGNETIC WAVE IN T-BRANCH GIS BASED ON FDTD	350
<i>Rui Yao ; Yanbin Zhang ; Gangquan Si ; Chaojun Wu ; Ningning Yang ; Yanxia Wang</i>	
A 3-D BODY MODEL FOR PHYSICAL ACTIVITY MONITORING BY MICROWAVE RADIATION.....	354
<i>Manfredi, G. ; Petrini, V. ; Di Mattia, V. ; Pieralisi, M. ; De Leo, A. ; Russo, P. ; Cerri, G. ; Scalise, L.</i>	
BREATH ACTIVITY MONITORING BY MEANS OF A UWB RADAR WITH AUTOMATIC RANGE DETECTION	358
<i>Pisa, S. ; Cicchetti, R. ; Pittella, E. ; Piuze, E. ; Testa, O. ; Zvicer, S. ; Bernardi, P.</i>	
A NOVEL METHOD FOR MEASURING THE DIELECTRIC PROPERTIES OF SOLID MATERIALS IN THE MICROWAVE RANGE.....	362
<i>Seiler, P. ; Klein, B. ; Neumann, N. ; Plettemeier, D.</i>	
COMPENSATED DOUBLE-RIDGE WAVEGUIDE E-PLANE AND H-PLANE T-JUNCTIONS.....	366
<i>Ruiz, J. ; Soto, P. ; Boria, V.E. ; San Blas, A.A.</i>	
ON THE ROLE OF INFORMATION IN INVERSION AND SYNTHESIS - CHALLENGES, TOOLS, AND TRENDS.....	370
<i>Viani, F. ; Anselmi, N. ; Donelli, M. ; Garofalo, P. ; Gottardi, G. ; Oliveri, G. ; Poli, L. ; Polo, A. ; Rocca, P. ; Salucci, M. ; Tenuti, L. ; Massa, A.</i>	
COMMUNICATIONS THROUGH TIRES BY RADIOFREQUENCY IDENTIFICATION	374
<i>Manzari, S. ; Occkiuze, C. ; Heijnen, P. ; Caizzone, S. ; Marrocco, G.</i>	
TUNABLE VOLUMIC RESONATOR AT 150 GHZ USING MEMS TECHNOLOGY.....	378
<i>Hajj, R. ; Chatras, M. ; Blondy, P.</i>	
EVOLUTIONARY OPTIMIZATION STRATEGIES APPLIED TO WIRELESS FLEET MANAGEMENT IN EMERGENCY SCENARIOS.....	382
<i>Zappini, L. ; Marchesi, S. ; Polo, A. ; Viani, F. ; Massa, A.</i>	
DESIGN OF ELECTRICALLY TUNABLE PHASE SHIFTER FOR ANTENNA ARRAYS OPERATING IN KU-BAND	386
<i>Ouali, R. ; Osman, L. ; Razban, T. ; Mahe, Y.</i>	
ENHANCED BROADBAND ABSORPTION OF CRYSTALLINE-AMORPHOUS CORE-SHELL SILICON NANOWIRE ARRAY VIA DIVERSE GEOMETRY DESIGN	391
<i>Alzoubi, O.H. ; Naseem, H. ; El-Ghazaly, S. ; Said, T.M.</i>	
DECISION SUPPORT FOR SMART IRRIGATION BY MEANS OF WIRELESS DISTRIBUTED SENSORS.....	395
<i>Garcia Paucar, L. ; Ramirez Diaz, A. ; Viani, F. ; Robol, F. ; Polo, A. ; Massa, A.</i>	
TERAHERTZ FET DIRECT DETECTION RECTIFYING DETECTORS.....	399
<i>Golenkov, A. ; Sizov, F.</i>	
MUSIC-BASED ALGORITHM FOR RANGE-AZIMUTH FMCW RADAR DATA PROCESSING WITHOUT ESTIMATING NUMBER OF TARGETS.....	403
<i>Manokhin, G.O. ; Erdyneev, Z.T. ; Geltser, A.A. ; Monastirev, E.A.</i>	
IMPROVED WIRELESS LOCALIZATION OF MOBILE DEVICES IN SMART INDOOR SCENARIOS.....	407
<i>Moriyama, T. ; Polo, A. ; Viani, F. ; Giarola, E. ; Massa, A.</i>	
DEVELOPMENT OF A NOVEL WIDEBAND CONICAL DIELECTRIC RESONATOR ANTENNA	411
<i>Gharsallah, H. ; Latrach, L. ; Osman, L.</i>	
DESIGN AND MODELING OF RECONFIGURABLE BEAM REFLECTARRAYS FOR RADAR WEATHER APPLICATIONS	415
<i>Hajj, R. ; Rolland, N.</i>	
EFFICIENT RECTIFIER DESIGN ON JUTE MATERIAL FOR WIRELESS POWER TRANSMISSION	419
<i>Zeouga, K. ; Osman, L. ; Gharsallah, A. ; Sankaralingam, S. ; Gupta, B.</i>	
HYBRID RECURSIVE ACTIVE FILTERS FOR DUPLEXING IN RF TRANSMITTER FRONT-ENDS	422
<i>Gottardo, G. ; Donati, G. ; Musolf, C. ; Fischer, G. ; Felgentreff, T.</i>	

WIRELESS SENSORS FOR DISTRIBUTED MONITORING OF ENERGY-EFFICIENT SMART BUILDINGS.....	426
<i>Robol, F. ; Viani, F. ; Giarola, E. ; Massa, A.</i>	
ELLIPSOID ANECHOIC CHAMBER FOR RADIATION PATTERN MEASUREMENTS.....	430
<i>Farahbakhsh, A. ; Khalaj-Amirhosseini, M. ; Oraizi, H.</i>	
DUAL-BAND TEXTILE ANTENNA ON AMC SUBSTRATE FOR WEARABLE APPLICATIONS	433
<i>Mersani, A. ; Osman, L. ; Sfar, I.</i>	
LOW FREQUENCY NOISE OF MOSFETS IN PARTIALLY DEPLETED SOI TECHNOLOGY WITH MULTI-FINGERS	436
<i>Kai Lu ; Jing Chen ; Jiexin Luo ; Weiwei He ; Jianqiang Huang ; Zhan Chai ; Xi Wang</i>	
SUB-MW V-BAND CURRENT-REUSE VCO USING TRANSCONDUCTANCE BOOSTING TECHNIQUE.....	439
<i>Muh-Dey Wei ; Yu-Jen Lin ; Chao-Hsiung Tseng ; Negra, R.</i>	
FREQUENCY RECONFIGURABLE ANTENNA USING ACTIVE CAPACITORS.....	443
<i>Rouissi, I. ; Ben Trad, I. ; Floc'h, J.M. ; Rmili, H. ; Trabelsi, H.</i>	
DESIGN OF MULTIBAND AND WIDEBAND ANTENNAS WITH PRINTED DIPOLE	447
<i>Floc'h, J.M. ; Ben Trad, I.</i>	
DESIGN OF A DUAL-BAND ANTENNA FOR GSM, UMTS, WLAN, LTE AND WI-MAX APPLICATIONS	451
<i>Badri, H.W. ; Zairi, H. ; Gharsallah, A.</i>	
DESIGN OF AN EFFICIENT D-TV ENERGY HARVESTING SYSTEM FOR LOW-POWER APPLICATIONS	454
<i>Moura, T. ; Borges de Carvalho, N. ; Pinho, P.</i>	
0.01-50 GHZ POWER DETECTOR MMICS.....	458
<i>Zagorodny, A. ; Yunusov, I. ; Drobotun, N. ; Drozdov, A. ; Voronin, N.</i>	
DESIGN AND IMPLEMENTATION OF A DUAL BAND SIX-PORT JUNCTION	462
<i>Chagtmi, N. ; Boulejfen, N. ; Ghannouchi, F.M.</i>	
DESIGN CONSIDERATIONS FOR FREQUENCY SCANNING TRANSMIT ANTENNAS IN WIRELESS POWER TRANSMISSION APPLICATIONS	466
<i>Constantinides, C. ; Wenxing Tang ; Podilchak, S.K. ; Goussetis, G. ; Costanzo, A. ; Nicole, P.</i>	
PHASE RETRIEVAL AS A POWER INFLATION PROBLEM	470
<i>Lagana, A.R. ; Isernia, T.</i>	
RADAR TARGET DISCRIMINATION BY S-PULSE USING EXPONENTIAL β-SPLINES	473
<i>Rodriguez, J. ; Blanco, D. ; Carrion, M.C. ; Gomez, J.F.</i>	
GRAPHENE-BASED RECONFIGURABLE LEAKY-WAVE ANTENNAS FOR THZ APPLICATIONS	477
<i>Fuscaldo, W. ; Burghignoli, P. ; Baccarelli, P. ; Galli, A.</i>	
MULTIPOINT OPTOGENETIC CONTROL OF NEURAL ACTIVITY WITH TAPERED AND NANOSTRUCTURED OPTICAL FIBERS.....	481
<i>Pisanello, F. ; Sileo, L. ; Della Patria, A. ; Pisanello, M. ; De Vittorio, M. ; Oldenburg, I.A. ; Sabatini, B.L. ; Assad, J.A.</i>	
DESIGN AND PERFORMANCE ANALYSIS OF COMPLEX PLANAR TRIANGULAR MONOPOLE TEXTILE ANTENNA IN VICINITY OF HUMAN BODY FOR WEARABLE APPLICATIONS	485
<i>Dhaouadi, F. ; Beldi, S. ; Bedira, R. ; Gharsallah, A.</i>	
PROBES CORRECTION FOR PLANAR NEAR FIELD ANTENNAS MEASUREMENTS	489
<i>Taybi, C. ; Moutaouekkil, M.A. ; Rodrigues, K.K. ; Elmagroud, B. ; Ziyat, A.</i>	
WIDEBAND BANDPASS FILTER DESIGN FOR X BAND HORN ANTENNA VIA NUMERICAL TECHNIQUES.....	493
<i>Kopru, R. ; Aydin, C. ; Atilla, D.C. ; Kilinc, S. ; Yarman, B.S.</i>	
GROUND PENETRATING RADAR ASSESSMENT OF HISTORICAL BUILDINGS: THE STUDY OF THE ROOFS, COLUMNS AND GROUND OF SANTA MARIA DEL MAR, IN BARCELONA	498
<i>Perez-Gracia, V. ; Caselles, O. ; Clapes, J.</i>	
MEASURED DIELECTRIC PERMITTIVITY OF CHLORINATED DRINKING WATER IN THE MICROWAVE FREQUENCY RANGE	502
<i>Abdelgwad, A.H. ; Said, T.M.</i>	
A NOVEL SIW SIX-PORT JUNCTION.....	506
<i>Lakhdhar, S. ; Harabi, F. ; Gharsallah, A.</i>	
MICROWAVE RESONANT CAVITY AS A REACTOR FOR THE ENZYMATIC HYDROLYSIS OF SUCROSE.....	511
<i>Casu, S. ; Fanti, A. ; Djuric, N. ; Desogus, F. ; Mazzarella, G.</i>	

EMF APPLICATION TO SOIL DISINFESTATION AND AGRO-FOOD PROCESSING FOR A SUSTAINABLE DEVELOPMENT	515
<i>Valbonesi, S. ; Bisceglia, B.</i>	
THE DEVELOPMENT OF INDIRECT MICROWAVE HOLOGRAPHY FOR MEASUREMENT AND IMAGING APPLICATIONS	519
<i>Smith, D. ; Livingstone, B. ; Elsdon, M. ; Schejbal, V. ; Hu Zheng ; Yurduseven, O.</i>	
RECONFIGURABILITY OF THE INTEGRATION TIME IN STEPPED FREQUENCY GPR SYSTEMS	523
<i>Persico, R. ; Matera, L. ; Dei, D. ; Parrini, F. ; Ciminale, M.</i>	
DIRECT AND INVERSE SCATTERING OF MOVING CYLINDERS AT RELATIVISTIC AND NON RELATIVISTIC VELOCITIES	527
<i>Gragnani, G.L. ; Pastorino, M. ; Raffetto, M. ; Randazzo, A.</i>	
Author Index	